DOCUMENT RESUME

ED 071 944 SO 005 089

TITLE	Canadian Environmental Concerns: Winnipeg, Manitoba. Progress Report. Project Canada West.
INSTITUTION	Western Curriculum Project on Canada Studies, Edmonton (Alberta).
PUB DATE	Jul 72
NOTE	36p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Changing Attitudes; City Planning; *Curriculum Development; Curriculum Planning; Ecology; *Environmental Education; Interdisciplinary Approach; Pollution; Projects; Secondary Grades; *Student Attitudes; Teacher Developed Materials; *Urbanization; Urban Studies
IDENTIFIERS	Canada; *Project Canada West

ABSTRACT

Part I of this progress report places emphasis on curriculum development from the standpoint of the teacher-developer. The role is defined and factors such as teacher selection, release time, administrative cooperation, work schedules, assigned work space, and benefits to the school division and to the teacher are discussed. Recommendations deal with planning time: teachers should be hired for summer curriculum development and full release time should be given to development of materials, to field testing, and to evaluation. Part II reports on the to-date development of processes and materials. The approach to the six week program is interdisciplinary, with emphasis on geography and biology. The objectives (listed as ten Intended Learning Outcomes) are to develop student awareness of and increase positive attitudes toward urbanization. The use of films, transparencies, simulation games, taped interviews, and newspaper articles is outlined in an introduction to Urbanization and in sections of Population, Attitudes, Environmental Concerns, Legislation and Urban Planning. Under Environmental Concerns, behavioral objectives are listed for two to three day units on Water Pollution, Air Pollution, Urban Resources, Solid Waste Management, Noise Pollution, Food and Closed Ecosystem. The major ideas or skills to develop for each objective are listed, as are materials developed so far for each unit. Part III acknowledges assistance received from various agencies and organizations. A related document is ED 055 015. (JMB)

ED 071944

SØ 005089

CANADIAN ENVIRONMENTAL CONCERNS

WINNIPEG, MANITOBA.

PROGRESS REPORT.

JULY, 1972.

Western Curriculum Project on Canada Studies

ED 071944

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

PROJECT CANADA WEST

CANADIAN ENVIRONMENTAL CONCERNS

WINNIPEG, MANITOBA

PROGRESS REPORT

JULY, 1972.

CANADIAN ENVIRONMENTAL CONCERNS.

TEAM MEMBERS:

ST. JAMES-ASSINIBOIA SCHOOL DIVISION.

C. A. WATSON	JOHN TAYLOR COLLEGIATE
J. A. SAMMONS	JOHN TAYLOR COLLEGIATE
A. I. MacIVER	ST. JAMES COLLEGIATE JOHN TAYLOR COLLEGIATE
R. E. PHILLIPS	WESTWOOD COLLEGIATE

TRANSCONA SPRINGFIELD SCHOOL DIVISION.

A. S. HELGASON	JOHN GUNN JUNIOR HIGH

* * * * * * *

TABLE OF CONTENTS:

PART 1.

THE PROCESS OF CURRICULUM DEVELOPMENT:

- introduction
- teacher release time
- teacher selection
- internal administrative difficulties
- space to work
- school division co-operation
- provincial representatives
- benefits to school division
- personal teacher development
- how the students feel
- student exchange program June, 1972

PART 2.

OUTLINE OF PROPOSED SIX-WEEK PROGRAM.

- model for program
- student progress
- intended learning outcomes
- urbanization
- population
- individual
- environmental concerns
    a) water pollution
    b) air pollution
    c) urban resources
    d) solid waste management
    e) noise pollution
    f) food
    g) closed ecosystem
    h) legislation
    i) urban planning

PART 3.

SUPPORTING AGENCIES.

a) The Manitoba Teachers' Society
b) Red River Community College
c) Winnipeg Free Press
d) Winnipeg Tribune
e) Radio Station CBW 990
f) Radio Station CJOB

TABLE OF CONTENTS (cont'd)

g) The Education and Information Task Force of the Environmental Council of Manitoba.

h) The University of Winnipeg.

i) The Junior League of Winnipeg.

j) Winnipeg Pollution Probe.

k) Cowl Limited.

l) Manitoba Department of Education.

m) Zero Population Growth.

n) Department of Mines, Resources and Environmental Management.

o) Manitoba Museum of Man and Nature.

p) Article - The Manitoba Teacher - June, 1972.

PART 4.

CONCLUSION.

PART 1.

PART I.

The Winnipeg 'Canadian Environmental Concerns' curriculum development team has been following the basic concepts of the Johnson-Aoki model throughout its two year lifespan. This model sets consecutive levels or phases of accomplishment ranging from one to five as indicated below:

Phase I - Acquisition of knowledge

Phase II - Development of materials

Phase III - Design of teaching strategies; Initiation of pilot programs

Phase IV - In-Service training of teachers

Phase V - Evaluation

Although the team has been involved in developing portions of all segments of this model, it has concentrated largely on phases I and II and is presently continuing to do so. Phases beyond this will be looked into more thoroughly over the summer and next fall; the intent being to initiate pilot programs approximately January, 1973. Throughout the period of our work thus far, we have managed to develop more than curriculum. We have developed a very definite appreciation for the requirements of a task of this nature; we have developed a backlog of useful information in the environmental field; we have developed specific curriculum materials to be used in educational endeavours; and some days we feel well on the way to developing ulcers. In this report, we will attempt to expand somewhat on each of these facets.

Teacher Release Time.

To facilitate the organization and continuity of the team's efforts, we requested and were successful in obtaining a half-time teaching load for one team member. We felt that our project could continue smoothly with one-half day release time every six teaching days for the other four team members.

We soon ran into problems. Curriculum development can be very difficult with one person alone. There is little or no chance for interaction and discussion of what should be in the curriculum. The administration and organization of the group activities takes up much of the time. Also, letter writing, communication and public relations consumes valuable hours.

When the team gets together on meeting days, the majority of discussion is around business, correspondence, planning for in-services, Project Canada West meetings, interviews, reports and so on. There is generally little time left for any discussion or effort on actual curriculum development.

As a team, we are still attempting to develop curriculum on teacher release time, a premise that all our team members entered this project on. We have had several evening meetings and weekend meetings but our feelings are that the project work should continue, as initially agreed upon, on teacher release time.

We also found, if time is given to teachers, one day here and one day there, the continuity of curriculum development is difficult to maintain. Too much time is spent refreshing our memories and looking over material already covered.

We feel that the teacher's role should be something other than standing in front of a classroom. We do, however, need acceptance from the students, the administration, and from the community. The teacher should be a coordinator of knowledge for the students, a curriculum developer and professional person to his administration, and a responsible person to the community. It is essential that the teacher's role in curriculum development be communicated to the people involved.

Recommendations.

1. Teachers should be hired for summer curriculum development. A block of time would give continuity of thought and development. The block of time for example, could be one month. Teacher remuneration in place of release time remuneration could be considered. It is further suggested that materials developed during the summer would be available for immediate use in the classroom in the fall. In addition, this type of release time would alleviate many of the administrative difficulties now very apparent.

2. A second recommendation for ultimate development of curriculum materials is that the team should be released full time to develop materials and processes and should work in close conjunction with different schools and different teachers to pilot and evaluate materials produced. Close co-operation with schools and teachers would insure that there is a proper trial and evaluation of newly-formed techniques and materials.

Teacher Selection.

Our team has gained an appreciation for the teacher requirements for curriculum development projects. Some consideration should be given to the teachers selected with reference to their educational background, their knowledge of curriculum development, and their enthusiasm.

Teachers should be selected only after their school administrators are made aware of the commitment that both will be undertaking. Administrators should be willing to assist team members in achieving their curriculum development by considering release time as an essential part of his professional activity. Positive suggestions and a positive attitude on the part of the school administrator does much to enhance the activities within the group. School administrators are key personnel with reference to release time and continued support for the team; therefore they should be chosen carefully.

Internal Administrative Difficulties.

Numerous difficulties have hampered the teams progress during its two-year lifespan. One problem has been arranging for release time. Some assistance was given initially this year as one team member was released half-time from his teaching load and another team member was released from one class. Difficulties sometimes arose when full-day meetings were necessary and the teachers had to leave the classroom. Generally, substitutes were called in with no problems arising. The difficulty was with reference to the team members workload. The absence from class generally put pressure on the teacher to get caught up with work that should have been completed the day of his meeting.

With reference to our team's requirements for next year, we felt that two team members (minimum) should be off together to work on finalizing course content and production of materials. It was also felt that if two team members were released, our team would have a good chance to follow up our pilot programs, do a lot of evaluation, and rebuild the weaker portions of our course. Two teachers off half-time, with the other three team members meeting once a week could probably have accomplished this task quite well. However, the team was unable to arrange for this release time to their satisfaction. We felt that two team members off together was essential for the interaction necessary for proper curriculum development. Due to personal and professional reasons only two team members out of five would consider the half-time teaching situation and these two could not be time-tabled off at the same time. The primary reason was that they both teach the same subject and this would mean less options for the students at the school if both were off every afternoon.

As a result, there are no team members asking to be released half-time next year. The team still plans on doing as much as possible with whatever release time we can arrange. Looking ahead, the time requirement will be considerable.

Another problem that arises with release time is that three team members are at the same school next term. When a meeting is called, all three teachers will be away from classes. This could be an area of concern as there may be students taking classes from more than one of these teachers.

Space to Work.

Another area of concern for our team is to find an area to work. We have accumulated a large amount of material and space is essential for our meetings and to lay out our materials to discuss and develop. This past year, we have been fortunate in obtaining a vacant teacher preparation room at Sturgeon Creek Regional Secondary School in the St. James-Assiniboia School Division through the consent of our superintendent, Mr. R. A. MacIntosh, and the Assistant Superintendent, Mr. A. E. Goebel. It has been an excellent area for working and meeting. Unfortunately, we have to leave this area as the school will have a larger enrolment next fall and the room will be occupied. As we now stand, we do not have any specific location. Hopefully, with some assistance, we will find a suitable location for continuing our curriculum development next fall.

School Division Co-operation.

We would like to point out the excellent co-operation we have received from the St. James-Assiniboia School Division. They have been of great help to our team in arranging for partial payment of a half-time teacher so that team members may be released. They have been very co-operative in releasing team members to attend conferences on several occasions. They have co-operated in finding our team a very suitable area to work in for the past year. They have at all times generated a sincere interest in the process of curriculum development. Our hope as a team is to produce materials that will make our division proud.

The Transcona Springfield School Division has also co-operated with our project by allowing one team member release time to attend our project meetings.

Provincial Representatives - Project Canada West.

Our team would like to acknowledge the efforts of Mr. G. K. Breckman, The Manitoba Teachers' Society, and Mr. M. Yakimishyn, Department of Education, during the past year. Communication is sometimes a difficult area but our team has received much information during the past year to assist us in co-ordinating our task.

One notable endeavour was setting up a meeting to inform educators at all levels of what can be done and what has been done in the area of curriculum development. Project Canada West Manitoba teams all made brief presentations indicating what their projects were all about.

As a result of this meeting, Project Canada West received press and radio coverage to further inform the general public of the unique type of curriculum development that is now occurring.

Possible Benefits to the School Division.

a) As a result of the experience gained during Project Canada West curriculum development, the team members could represent a core of individuals that would be considered as future resource people for in-service programs. Last year, four team members did participate in an in-service program in the St. James-Assiniboia School Division. This past year, three team members were asked to present material at the Saskatchewan Social Science Teachers' conference in Regina and did so. Our team members are presently planning to make a presentation to the Manitoba Social Studies Teachers' convention this coming October in Winnipeg.

b) As participating school divisions in Project Canada West we believe that pilot programs from other PCW projects across the western provinces will be a frequent occurrence in our division in the future. Our team has already requested that pilot information be sent to our team which will then be passed on to our superintendent to determine where it may be used for pilot purposes. All grade levels will be involved in the piloting of Project Canada West materials.

Personal Teacher Development.

As a result of two years with Project Canada West, the team members would like to suggest a few ways they feel they have benefited personally from their involvement.

a) All team members had many opportunities to meet people through their project work. Some were resource people, some were educators at different levels, and some were people who were interested in what is going on in education today. It was rewarding for us to explain Project Canada West as an on-going curriculum development experience.

b) All team members have had an opportunity to speak at conventions, either PCW meetings or other teacher conventions. Again, this was our pleasure as one gains a sense of well-being when others are interested in what type of curriculum activities you may be involved in.

c) Certain team members were called upon to act as resource persons for a position paper being prepared by the Department of Education.

d) Two project members were accepted and attended a National Science Foundation (USA) summer institute at Iowa City in 1971. The institute was an interdisciplinary look at environmental concerns.

These same two members were accepted at the University of Cincinnati with a National Science Foundation grant again for this coming summer. One team member will be attending. It is an institute that will be considering the problem of Population and Over-Population. We feel that our interest in curriculum development and our participation in this project has definitely helped us in being accepted for these NSF summer institutes.

e) Our team members feel that Project Canada West has been a stimulating factor in starting us off on further educational endeavours (i.e. Masters degree).

f) Travel experience is something that each team member has enjoyed. To travel to new and exciting cities, to meet new friends with similar educational interests, and to bring back our experiences to our own school division has been one of the most interesting parts of our team's experience.

g) We are all classroom teachers. We all feel that we have a different awareness of the classroom situation now after being involved in curriculum development. We have begun to look more at our own performance in the classroom and we have begun to try new and exciting things. Our enthusiasm, especially when dealing with project materials and environmental concerns, is very much heightened and we feel that this does things to the class that can only be beneficial.

h) Through our curriculum development, we as a team, have all become more professionally competent. Knowledge of material and variety in technique employed are just two of the areas we are referring to here. We also now have a greater pulse on the resources to be found within the community and we are making use of these resources whereas prior to our study, they were unknown to us.

i) Finally, we have all become aware to some extent of how the educational hierarchy actually functions. Sometimes we feel a bit radical and as a group we would like to change the system. Hopefully, as our course and other PCW courses become available, the system will begin to see that new ideas can be good ideas and that some old methods are in need

of some revision. We, as a team, all feel that we have become better teachers over the past two years. Education can become more than just a word to some; it can become an exciting experience, given the proper climate for learning to occur.

How do the students feel?

As a result of our involvement in curriculum development, we have all discussed curriculum to some extent with our students. Many suggestions have been given to us and we are hoping to try a few of these in our pilot programs. We feel that our students have benefited in a number of ways.

a) The enthusiasm of the teacher is reflected in the efforts of the class and their interest in activities.

b) New approaches to course content is appreciated by the students as they feel much more involved and much more a part of the educational system.

c) Students enjoy being involved in evaluation of their fellow students' work and also in the evaluation of the materials used in class.

d) Student trips to urban centers - sponsored by Project Canada West (special funds) - is a tremendous boost for the students involved. Education can most certainly be accomplished to some extent outside the four walls of a classroom.

e) Team members felt that the students' view of the teachers involved in this kind of project is somewhat changed in that they appreciate the teachers' involvement in an area that does concern them.

f) Television production -- undoubtedly a most memorable experience for some of the students who participated.

Student Exchange - June, 1972.

The Environmental Concerns team felt that the recent PCW student exchange was an excellent idea. This approach to education gave students from other cities in Canada a chance to see and visit with students in Winnipeg. It also provided the team with an opportunity to meet with parents of students in the community to discuss educational goals and objectives.

PART 2.

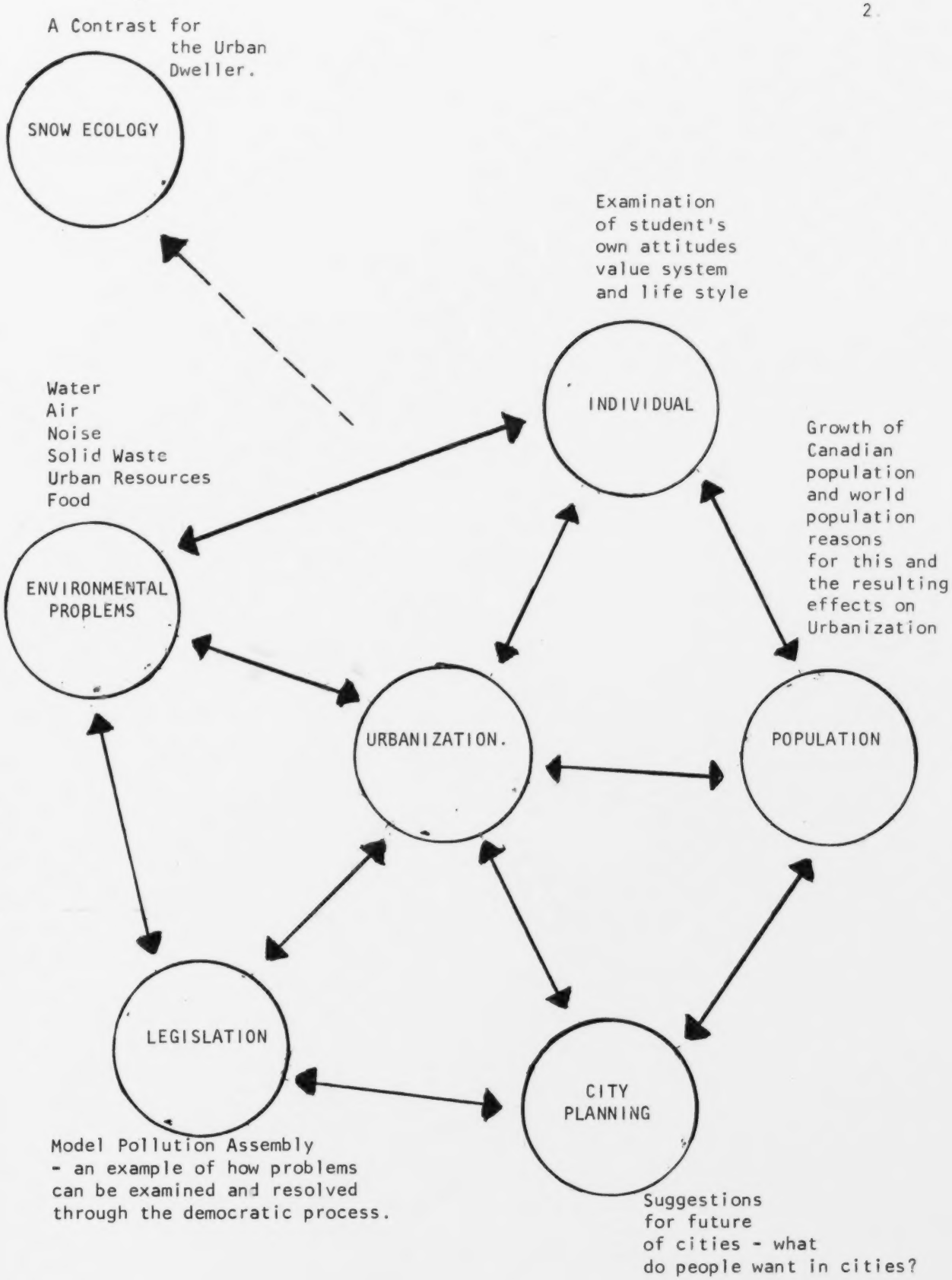
PART 2.

An Outline of the Proposed Six-Week Unit.

The Canadian Environmental Concerns team has spent much of the past year in the development stage. We are in the process of completing a six-week unit of studies that will take an interdisciplinary environmental approach to urbanization. Several disciplines will be involved but the two major ones are geography and biology. The major thrust has been the development of processes and materials. The team has attempted to involve students and other teachers as much as possible.

One of the biggest problems facing an individual in a city is that of environmental quality. The school is one area where we can have the student examine the problems in various lights. Hopefully, the student would examine his own attitudes, value system, and life style with regards to the urban setting and other individuals in the city.

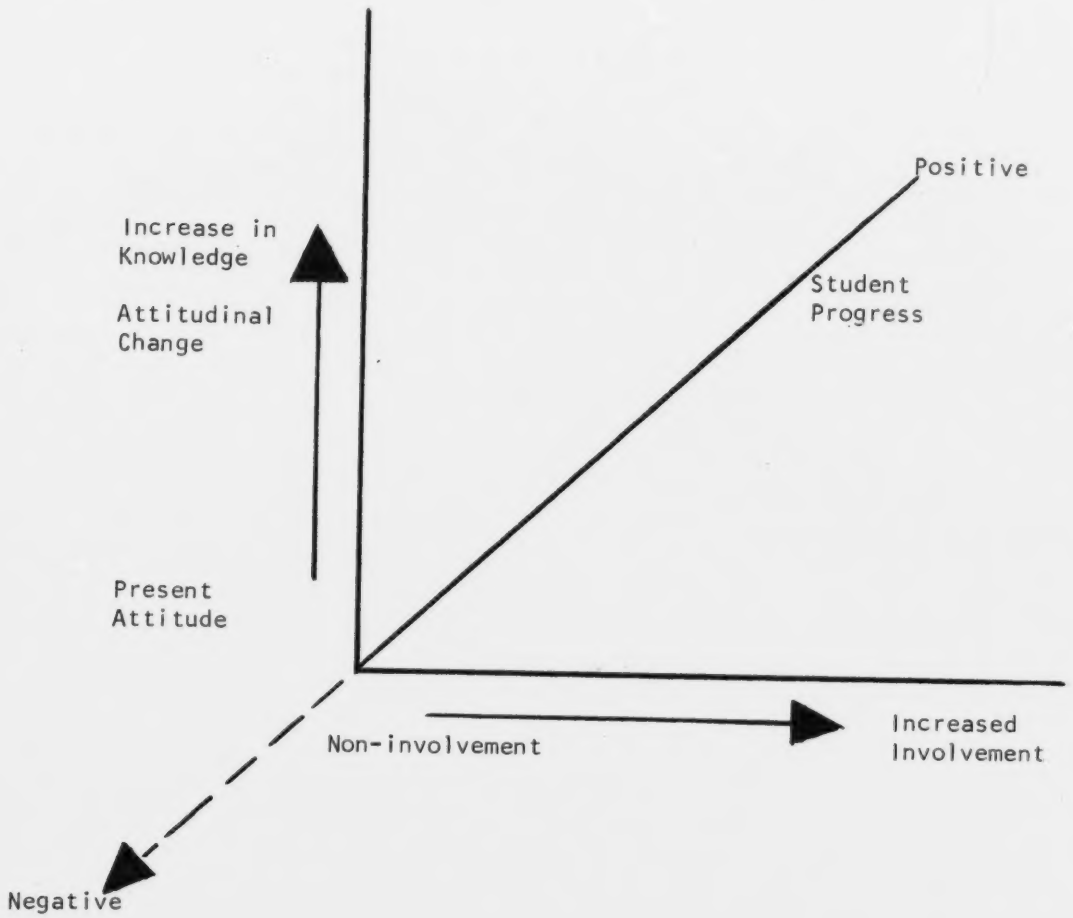
The model for our six-week program is on the following page.


A Contrast for the Urban Dweller.
SNOW ECOLOGY
Examination of student's own attitudes value system and life style
INDIVIDUAL
Water
Air
Noise
Solid Waste
Urban Resources
Food
ENVIRONMENTAL PROBLEMS
Growth of Canadian population and world population reasons for this and the resulting effects on Urbanization
URBANIZATION.
POPULATION
LEGISLATION
CITY PLANNING
Model Pollution Assembly - an example of how problems can be examined and resolved through the democratic process.
Suggestions for future of cities - what do people want in cities?

All six areas are inter-related and inter-dependent. A change in one area will effect all other segments. The course would begin with an introduction to urbanization and then continue with an investigation of the other areas to see what effect they play in the overall aspect of living in the city.

As the student studies the program, we would hope to have him move several points on a continium from his present perception of his environment and his ideas to a greater awareness of his world and the ideas of others. An attitudinal change either positive or negative would indicate that the student has received some input which he has considered and has made some decision about. The following diagram will illustrate the type of movement the student should achieve as he studies the course.

Pre and post-attitudinal surveys would be administered to ascertain student progress.



With reference to our model for the six-week program, we have established the following list of Intended Learning Outcomes (ILO's):

1) To develop an understanding of the process of urbanization with particular regard to the Canadian environment.

2) To develop an understanding of the inter-relationship between population and urbanization.

3) To develop an understanding of the effects of urbanization on the individual.

4) To develop an understanding of the individual's attitude as a contributing factor to the effects of urbanization.

5) To develop an understanding of how the population (and its individuals) contributes to environmental problems.

6) To consider the environmental situation with the purpose of having the student examining and developing his own value system.

7) To develop techniques and skills applicable to environmental studies.

8) To develop an attitudinal change in the individual with the intent of promoting a positive attitude toward environmental conservation.

9) To consider legislative action as a vehicle for urban environmental changes.

10) To develop concepts of urban planning as an integral part of a "blueprint" for survival.

Each of the particular topics has a further set of specific 'behavioral' objectives that get more precisely at the kind of activity we plan on carrying out. Specific materials are also being developed for each of the topics. There will be a variety of activities, references, and sources for each so that the teacher and student will have a good opportunity to select those that are best suited to his own personal needs.

The materials, activities and suggestions will eventually be compiled into a teaching manual that will be transferable across Canada. We are attempting to include as many Canadian references as we are able to investigate. Our 'kit' will also include a series of slide presentations on different topics, a simulation game (PCW produced and commercially produced), some film and video-tape material, some reference reading material for teacher and student, some overhead projector transparencies, some cartoons, some informational pamphlets, and hopefully a number of other interesting surprises.

More specifically, here is a description of the types of materials we have considered, evaluated and prepared. We will comment briefly on each unit in our program.

Urbanization - An Introduction.

There are several films available that do a good job in introducing our course. We are still previewing them and hope to make some final decisions in the near future. Introductory ideas for the course will be given in the teachers' manual.

Population.

A series of overhead projector transparencies that deal with this topic are presently in production. Some examples are:

a) Showing increase in Canadian population.

b) Increase in Canadian and World population superimposed.

c) A series of overheads showing the balance of man and nature - i.e. hunting, gathering societies.

d) A series of overheads showing how man moved out of balance with the environment due to increased food supply, better sanitation, medical advances, increased technology and urbanization.

e) A series of overheads on birth rates and death rates showing where over-population occurred.

Along with these overheads, a simulation game has been produced in which the students examine increased numbers, vested interests, technology and environmental degradation.

The commercially produced simulation game 'Extinction' would also be utilized in our population section as it very effectively deals with the problem of over-population as well as numerous other environmental problems.

Taped interviews are another vehicle by which students can examine the viewpoints of several different segments of the society toward controversial population issues such as abortion - e.g. tape of Mr. Joe Borowski, MLA, Manitoba. Students and teachers can obtain information by writing federal M.P.'s (see letter page 7.)

Individual.

Possibilities:

a) A slide series or overhead series showing individual attitudes toward urban situations; resulting problems of certain attitudes and attitudes required to bring about change.

b) A series of newspaper articles and cartoons indicating societal attitudes through its individuals.

c) Tapes of individuals - re a specific topic - used to show different attitudes and their basis for the individuals involved.

Environmental Concerns.

This section is divided into six different areas of concern. It is our contention that the class taking this course would spend either two or three days on each different area, or the class could be divided up into groups to investigate just one or two of the concerns. The method followed would depend on the individual teacher and class as well as the availability of certain resource materials to carry out some of the suggested activities.

a) Water Pollution.

We are presently working on a teacher-student information package with some content on water pollution. Our content will be limited and the reason for this is that this area is constantly changing and new data is being published quite regularly. We are also developing a series of activities for students to become involved in, a series of enclosures dealing with water problems, a list of reference books, magazines and other visual aids and also where these materials may be obtained. A series of 35mm slides is presently being considered. A commercially produced simulation game 'Dirty Water' is being studied to evaluate its effectiveness in this section.

HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

O T T A W A,
K1A 0A6.

May 18, 1972.

Mr. J. Sammons,
John Taylor Collegiate,
700 Hamilton Avenue,
WINNIPEG, Manitoba. R2Y 0H4.

Dear Mr. Sammons,

Thank you for your letter of May 15 telling me about your Project Canada West. This sounds both interesting and useful.

Enclosed is some material which I hope will be of use to you. As you will understand, I am not in a position to furnish you with material of a more general nature, but I have gone through my files and have chosen what I thought most suitable.

I have asked Statistics Canada to send you copies of population statistics, which will come to you direct from them.

My Bill, C-76, is the legislation I would propose as regards abortion, but I wish to make it quite clear that I do not advocate abortion as a form of birth control, but as a last resort when all else has failed. My emphasis is on a many-pronged attack on the birth control problem, through Birth Control Clinics, education in the schools beginning at an early age with solid backing from the government at all levels.

Yours sincerely,

Grace MacInnis

Grace MacInnis,
M.P., Vancouver-Kingsway.

Encs: Various.

Following is a list of the behavioral objectives for our water pollution section. Although it may appear rather long and detailed, it is not designed as a prescriptive format that every teacher must follow to the n'th degree.

WATER POLLUTION

BEHAVIORAL OBJECTIVES	MAJOR IDEAS OR SKILLS
1. To consider some fundamental characteristics of water resources.	General introduction to water. Characteristics of water resources.
2. To examine the sources of various water pollutants.	Consideration of water pollutants under three broad headings: a) degradable, b) non-degradable, c) persistent.
3. To examine the variety of effects of water pollutants.	Consideration of effects under three broad headings: a) Health, b) Ecological, c) Property.
4. To consider sewage as a prime source of water pollution and the reasons for this.	Consideration of the basic problems with sewage under three broad headings: a) disease, b) organic, c) nutrient.
5) To give each student the opportunity to observe the local water treatment plant to learn the methods of sewage treatment in their urban area.	Consideration of primary, secondary, and tertiary treatment and the handling and disposal of left-over sludge.
6) To examine water quality standards and some relevant characteristics of water quality management.	Consideration of water quality objectives including general and specific.
7) To engage in an hypothetical problem-solving situation as caused by pollution factors on different species of living organisms.	By means of the simulation game, 'Dirty Water', apply their knowledge to a hypothetical pollution problem.

b) Air Pollution.

A similar teacher-student information package is being developed here. A certain amount of content will be put into the teacher guide as a general help to the teacher who is not that familiar with this area. Numerous teaching strategies and class activities will be suggested. There will be a series of enclosures on relevant air pollution problems. Reference books and magazines will also be listed and the sources made available.

A commercially produced simulation game 'Smog' has been evaluated and our team has found it to be a difficult one to use effectively. We are presently looking for a more suitable simulation game for this area.

On the following page is a list of behavioral objectives for our air pollution unit. Again, these are not designed to be prescriptive but rather to give the student and the teacher suggestions for areas of involvement.

AIR POLLUTION.

BEHAVIORAL OJBECTIVES	MAJOR IDEAS AND SKILLS
1. To give an introduction to air pollution and provide a basis for understanding why air quality must be protected.	Define air pollution. Outline necessity for clean air.
2. To examine the sources and amount of air pollution in an urban environment based on air pollutants being divided into two categories on the basis of their chemical stability.	Sources - (two categories): a) Substances that do not react with other substances and are not changed in the air. b) Invisible, chemically active substances.
3) To examine the effects of air pollution with reference to humans, vegetation, materials and ecology.	Effects on: a) human health b) vegetation c) Ecology - wildlife, global climate. d) Materials - corrosion, aesthetic and economic factors.
4) To consider some relevant characteristics of air pollution that are of significance when considering air quality management.	Characteristics considered: a) a public good - clean air b) urban region concentrations c) dispersion in atmosphere d) coming from outside Canada e) air, water and soil relationships f) something new all the time.
5) To construct, employ, interpret and evaluate a survey form with reference to air pollution.	Survey of local community (or other): a) automobile b) air pollution (local or city) c) percentage of people involved in automobile industry.
6) To give the student the opportunity to find out what local government authorities are responsible for air pollution control.	Field trip or speaker (Clean Environment Commission) to inform on all aspects of government control, sampling, monitoring for air, water, soil pollution problems.

c) Urban Resources.

A teacher-student information package is also being developed for this unit. Suggested teacher strategies and student activities will be the main materials here. Our behavioral objective number 5 below indicates the major thrust for this area. As well as looking at urban problems through pressures on the available resources, this unit prepares the student for the Urban Planning section that will finalize our six-week course.

The commercially produced simulation game 'New Town' has been evaluated and will be possibly be included in this unit or in the Urban Planning section to complete our course.

Below is a list of the behavioral objectives for this unit of study.

BEHAVIORAL OBJECTIVES	MAJOR IDEAS OR SKILLS
1. To understand that within the context of the urban region, urban resources refers to the environmental resources or natural elements of the system that support a variety of interrelated life systems.	Recognition of the essential productivity of resources such as space, topography and climate, and the social utility of what have been called amenity resources such as attractive and quiet surroundings.
2. To consider space as one of the urban resources with congestion, blight and sprawl as interlocking phenomena that stem from pressure on space resources.	Space - scarcest of all urban resources causing problems of concentration (congestion). Sprawl - rapid un-coordinated extension of suburbs. Blight - deterioration in housing stock. (eg).
3. To understand that sources and effects of pollution are concentrated in urban regions and represent the most significant sources of pressure on urban resources.	Those activities that represent the most significant sources of pressure on urban resources: Transportation; housing; industrial growth; outdoor recreation.
4. To consider visual resources as an important ingredient of beauty for urban areas and the resulting visual pollution once negative visual stimuli reaches an intensity whereby it interferes with man's enjoyment of his environment.	Aspects of visual stimuli, their effect and their necessity or desirability.
5. To outline a number of activities by which the student may become involved in researching the problems of urban resources.	Photography projects, research papers, interviews, outdoor education field trips, simulation games.

d) Solid Waste Management.

A teacher-student information package will be supplied here as well. It will have some explanatory content and will suggest numerous classroom activities that will allow the student to understand more completely the nature of the solid waste problem for urban areas. Experiments bring reality into the classroom in this unit. Reference material will be indicated and sources will be given for this material. Information will be included to show how a school can get organized to begin a re-cycling project.

A series of slides is presently being developed as a possible reference unit for this section.

A video-tape television program showing students involved in presenting a creative dance on garbage has been produced by our team and will form part of the material to be included.

The behavioral objectives for this unit are stated below.

SOLID WASTE MANAGEMENT.

BEHAVIORAL OBJECTIVES	MAJOR IDEAS OR SKILLS
1. To increase our awareness of the extent of the solid waste problem within the urban environment.	Amount of solid waste produced. Sample of composition.
2. To consider some of the reasons for the vastness of the solid waste problem in our urban environments.	a) Composition constantly changing. b) Stagnant technology. c) Throwaway society.
3. To establish the major methods of disposal of solid wastes in our urban environment.	a) Sanitary Landfill. b) Incineration. c) Composting.
4. To consider some of the effects of solid wastes as environmental health hazards.	Human diseases associated with solid waste mismanagement.
5. To evaluate a number of areas that contribute to excessive solid waste in our urban environment.	Packaging, plastics, glass containers, tin cans, industrial wastes, junked automobiles.
6. To give each student the opportunity to observe the solid waste problem in the urban environment.	Field trips to view the solid waste problem (associated with assignments).

e) Noise Pollution.

Materials developed in this unit include noise survey data collected in Winnipeg with PCW sound level meter; noise abatement study with a series of slides being prepared; and a series of overhead transparencies covering the anatomy and physiology of the ear.

f) Food.

A series of slides is being prepared on organic farming.

g) Closed Ecosystem.

A series of slides and overhead transparencies is prepared on the Ecosystem Concept.

Legislation.

A series of pamphlets indicating Federal policy, Provincial policy, and Municipal policy is being previewed by our team. Recent crises and agreements are also being followed as areas of environmental concerns are being looked at more seriously on an international as well as a national scale.

Suggestions will be included in this section such as writing letters to your Member of Parliament to make suggestions to him or to ask him for specific information. (see attached letters)

Students will be given the opportunity to conduct a legislative assembly at this point in the course. Everyone in class should participate. Class members are given the opportunity to play a role as a Member of Parliament and present bills of their own making dealing with environmental concerns to the rest of the class - i.e. to Parliament. A video-tape should be made of this activity if equipment is available to the teacher.

HOUSE OF COMMONS
CANADA

May 5, 1972

Dear Friend:

The Canadian Wildlife Federation and I had hoped to be able to let you know the result of our appeal, which was heard on 13 April, 1972 before the U.S. District of Columbia Federal Court, but at the moment this decision has not yet been handed down. It is expected soon, perhaps within the next two weeks, but I thought it best to write and let you know of the delay.

The hearing on the 13th of April was a success. The judges were sympathetic to us, and we are very hopeful that the decision will be favourable and we will not have to appeal further.

Enclosed is a newsletter from the U.S. Wilderness Society which you may find of interest. The Wilderness Society is one of the three groups seeking further injunctions on the pipeline/tanker issue, which we are trying to join in court. As you will note, the pamphlet is concerned mainly with Alaskan problems, and does not pay much attention to the Strait of Juan de Fuca or Strait of Georgia, but its analysis of the American studies on the proposed pipeline/tanker route (the so-called Impact Statement) will be of interest to you.

The newsletter urges writing to President Nixon, which may well be a good idea. In addition, Canadians might wish to write to the Honourable Donald MacDonald, Minister of Energy, Mines and Resources, House of Commons, or the Honourable Jack Davis, Minister of the Environment, House of Commons, and let these gentlemen know their views.

We will be sending another newsletter when the judges hand down their decision. Keep your fingers crossed!

Yours sincerely,

David Anderson,

David Anderson, M.P.
Esquimalt-Saanich

DA/gm
Enclosures

HOUSE OF COMMONS
CANADA

June 21, 1972

Dear Friends:

Since my last letter to you there have been a number of important developments in our campaign against the oil threat to our coast.

With respect to our lawsuit, things are now going fairly well. On June 7, 1972, the District Court in Washington announced that the application to lift the injunction would not be decided upon until September. In other words, the injunction preventing the construction of the Alaska Pipeline cannot be removed until that date. At that time, if the oil companies and the United States Interior Department win, we will appeal; and if we win we expect they will appeal. So it is unlikely that any go-ahead will be given for the pipeline at that time. Indeed, our lawyers are confident that legal battles will continue for at least another year.

As I have mentioned in previous letters, this delay is very much to our advantage. First, there is the United States presidential election in the fall, in which the Alaska Pipeline will probably be a major issue; and second, delay allows for further studies and an increasing public awareness of the significance of a western pipeline-tanker route.

Two other developments are worthy of note. Early this month pipe fittings on a Liberian tanker, unloading Middle Eastern crude oil at Cherry Point, burst and a small oil spill occurred. This oil reached the Canadian coast at Crescent Beach some hours later. Relatively little damage was caused, but the spill dramatically demonstrated what we can expect when the inevitable major spill takes place. This incident underlined the validity of our statements and our concern over the past two years. Also, it demonstrated the inaccuracy of oil company claims over the past years.

The second major development was the opportunity I had on June 9, 1972 to explain our concern to the Joint Economic Committee of the United States Congress. Senator Proxmire

... over ...

of Wisconsin, the man who halted construction of the U.S. supersonic transport, was the Committee Chairman, and appeared to be sympathetic to our point of view. We received good coverage in the United States newspapers, including the New York Times and the Washington Post. Copies of two articles are enclosed. Secretary of the Interior, Rogers Morton, will be testifying before the same Committee shortly. It will be interesting to hear what he has to say.

In closing, I would like to invite all of you who can make it to meet me at a beach party in the Odd Fellows Park at Crescent Beach, on June 28th, at 7:30 p.m. (same turnoff as Peace Arch Park near the border).

As you know, I have recently assumed a new role in provincial politics as Leader of the Liberal Party in British Columbia. I would most certainly appreciate your continued support. However, in the meantime, I would like to encourage you to join me on Wednesday, June 28th, for an evening of relaxation and informal discussion.

Yours sincerely,

David Anderson

David Anderson, M.P.
Esquimalt-Saanich

DA/gm
Enclosures

Urban Planning

Materials produced for this unit include a 35mm slide series of:

a) urban problems, and b) possible answers to urban problems.

Records indicating urban problems society must deal with have also been considered. A tape interview with an architect on urban renewal schemes - put forth as a possible answer to problems described by people interviewed on the street - has also been considered.

Our materials will be partially completed during the fall term (September through December, 1972). We are planning a partial pilot in January of 1973 and a further pilot of other materials to follow this. Our course involves outdoor activities to a certain extent. Some of them are geared toward winter weather - e.g. snowshoeing and snow studies - while others lend themselves better to warmer weather and these will be attempted in May and June, 1973. In future pilot programs, these activities could be handled quite well the first few weeks of school in September.

We are planning to develop pre and post-tests to investigate knowledge, attitudes and other changes over a period of time. We would have these ready for our pilot programs in January.

One of the outdoor activities is a snow study. We have been working in close conjunction with Dr. W. O. Pruitt, University of Manitoba, and also with a group of teachers from Wadena, Minnesota, (Mr. Richard Carman, Wadena Senior High School, Wadena, Minnesota).

PART 3.

PART 3

There were many supporting agencies that contributed in one way or another to our year of development of materials. As indicated below, some contributed their facilities, some contributed their time for consultation, some contributed materials and information, and some contributed publicity for Project Canada West.

a) The Manitoba Teachers' Society.

Although this organization is directly connected with Project Canada West, we arranged through them to have Mr. Rolande de Cosse do some television program work with our team on two occasions. The first occasion was the taping of a legislative assembly, which along with other material, provided the team with a presentation for the PCW workshop in Edmonton in March. The tape will also be utilized for future in-service programs and pilot teacher preparation. The second occasion was again a taping session to prepare material for the solid waste part of our environment concerns section and also to prepare material to have for the August workshop in Banff. This material will also be passed on to PCW for the film-sketch project that they are doing.

Mr. de Cosse is employed by Educom '71, Churchill, Manitoba, and part of his time has been purchased by the M.T.S. to do television work for them. Our team bought a portion of his time from the M.T.S.

b) Red River Community College.

With the assistance of Mr. Marcel Clement and his staff at the Red River Community College, and the use of the excellent facilities there, our team was able to produce a first-rate television production. This was the tape that we used at the workshop in Edmonton in March. It was indeed a memorable experience for our team to see a TV studio in action and act as TV directors, TV producers and TV personalities.

c) Winnipeg Free Press.

We were very pleased to have a fine write-up publicizing Project Canada West in this local daily paper. All three Manitoba teams were given recognition. The publicity came as a result of a meeting of all teams to inform a variety of persons about the Project and about the curriculum development that it was involved in. The article is shown on page 2 following.

The following newspaper articles have been omitted for reproduction purposes:

Student Involvement Theme of Project Canada West by Katie FitzRandolph. Article from the Winnipeg Free Press, Friday, May 5, 1972. (2 pages)

Manitoba Lifestyle Featured in Curriculum by Jenni Mortin. Article from the Winnipeg Tribune

Untitled article from the Winnipeg Tribune, May 3, 1972.

e) Radio Station CBW 990

Immediately following the press releases just mentioned, Gerry Haslam from CBW radio contacted us to see if we would consent to being on his telephone talk radio show. We agreed and Mr. Al Watson, representing the team, answered a number of questions informing the public of the activities that PCW was involved in and their plans for the future.

f) Radio Station CJOB.

Following the press and radio releases just indicated, Mr. Don Benham of CJOB radio interviewed Mr. Watson and team members of other Winnipeg teams.

g) The Education and Information Task Force of the Environmental Council of Manitoba.

Mrs. D. G. Malaher, a member of this group, came to interview Mr. Watson after hearing the radio interview with Mr. Gerry Haslam. She was keenly interested in the activities of the team and was intending to write a review of our activities for her group's newsletter.

h) University of Winnipeg.

Following the Gerry Haslam radio program, Dr. N. G. Wanamaker of the English Department, University of Winnipeg, contacted Mr. Jonas Sammons to find out what our group was doing with reference to including Canadian content in an urbanization course. As he was primarily interested in the area of English we referred him to Mr. Gordon Glaicar's team in Regina. They are producing a program called Urbanization As Seen Through Canadian Writings.

i) Eco-Man - An Environmental Happening.

The Junior League of Winnipeg.

Mrs. Hazel Quinton, chairman of the Junior League of Winnipeg, asked two team members, Al Watson and Ron Phillips, to act as judges for the pollution poster contest as they are classroom teachers in touch with the problems of pollution. It was an experience to remember and we gained an appreciation of the awareness of students of all ages of the problems associated with all forms of pollution. The whole Environmental Happening gave our team an assurance that the program that we are developing is one dealing with relevant problems of today that the students will have to face as adults.

Article and photograph omitted for reproduction purposes.

Article, Passports Issued for Ecology Journey from the Winnipeg Free Press, Thursday, March 16, 1972.

j) Winnipeg Pollution Probe.

Mr. John Morgan, a grade II student at John Taylor Collegiate, and a past member of the executive of Pollution Probe, was instrumental in organizing a recycling club within the school this past year. At first the paper was collected within the school. The students then extended their collections into the community on a regular weekly basis.

The initial collection of paper by Winnipeg Pollution Probe at John Taylor was covered by CJAY Television, and since then other schools within the St. James-Assiniboia School Division have begun paper drives. It was interesting to follow the numerous articles that appeared in the local weekly paper, the St. James Times, as they followed the progress of recycling in our area.

It is this kind of involvement and commitment that our team is striving for in certain areas of our environmental concerns unit. Following are a few of the articles published by the Times:

Several articles, a cartoon, and a picture display have been omitted for reproduction purposes. They are:

Students Work on Recycling from the Times
Paper Recycling Project Going Door to Door

Cartoon Wizard of Id

Photography of student recycling center

Page from Ecospeak: A Monthly publication of Winnipeg Pollution Probe.

k) Cowl Limited - Acoustical Engineers.

Mr. Ron Phillips, who is developing a unit on noise pollution, had the opportunity to visit Cowl Limited to find out what can be done about this problem. The management was very co-operative in showing Ron around, allowing him to take pictures to develop a slide presentation, and informing him of the many aspects of noise and its control.

l) Manitoba Department of Education.

Mr. Bill Soprovich, formerly the team leader of Canadian Environmental Concerns, called upon our team to address a group of individuals developing a position paper with reference to outdoor education and its future in Manitoba. Mr. Angus MacIver and Mr. Jonas Sammons represented our team. As part of our 6-week program deals with outdoor activities, our team is very much concerned with future educational endeavours out of doors. Members of the committee included Mr. Morley Lee, Faculty of Education, University of Manitoba; Mr. R. La Page, Department of Education; Mrs. P. Hildeman, Department of Tourism; Mr. D. Loewen, Camping Association; and Mrs. J. A. Kemp, Department of Health. Our team looks forward to future contacts with this committee.

m) Zero Population Growth.

Mr. Garry Parker, a member of Z.P.G., supplied our team with information and pamphlets which we previewed for our population section. One article of particular interest was a Survey of Attitudes towards Population Growth in Metropolitan Winnipeg compiled by Mr. Parker under a Canadian Federal Government Opportunities for Youth Project 1971 (Project number 401-293).

n) Department of Mines, Resources and Environmental Management, Manitoba.

Mr. M. Lysyk, chemist, and air pollution consultant, was contacted and has offered his services to our team with reference to evaluation of our air pollution unit. Mr. J. MacKay, environmental hygienist, has also offered his advice on areas of the environment to our team. Both of these gentlemen will be contacted in the near future as our team finalizes the environmental concerns units.

o) Manitoba Museum of Man and Nature.

Dr. D. Hemphill has expressed interest in our project and has offered whatever assistance he may give to our team. During the recent P.C.W. student exchange, Dr. Hemphill gave the students and team members a tour through the Museum. Part of the tour included a behind-the-scenes look at what goes on in a Museum - i.e. how the exhibits are planned and prepared.